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Appl. No. 10/064,352
Reply to Office action of September 13, 2007

Amendments to the Claims:

The listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

- 5 Claim 1 (currently amended): An electronic circuit comprising:
- a servo control and ECC decoder circuit for controlling a removable media device to obtain encoded data from a removable media, and for performing a decoding process to obtain decoded data from the encoded data and storing the decoded data in an external memory;
 - 10 a graphics decoding circuit for decoding graphics data held in the external memory to generate video data and audio data; and
 - a memory controller to provide read and write access to the external memory for both the servo control and ECC decoder circuit and the graphics decoding circuit[.];
 - 15 a communications pathway electrically linking the Servo control and ECC decoder circuit with the graphics decoding circuit to permit the servo control and ECC decoder circuit and the graphics decoding circuit to exchange information;
 - wherein the graphics decoding circuit performs a graphics decoding process on the decoded data to generate the video data and audio data,
 - 20 wherein the decoder circuit, the graphics decoding circuit, and the memory controller are either fabricated on a monolithic substrate or within a packaging substrate[.];
 - wherein the servo control and ECC decoder circuit further comprises a
 - 25 register accessible by the graphics decoding circuit that indicates the location of decoded data in the external memory.

- Claim 2 (original): The electronic circuit of claim 1 wherein the graphics decoding
- 30 circuit utilizes the memory controller to store the video data in the external

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memory.

Claim 3 (original): The electronic circuit of claim 1 further comprising video output
circuitry for generating a video signal for an external display device
5 according to the video data.

Claim 4 (cancelled)

Claim 5 (cancelled)

Claim 6 (currently amended): The electronic circuit of [claim 4]claim 1 wherein the
10 servo control and ECC decoder circuit comprises a signal to indicate to the
graphics decoding circuit that newly decoded data is available in the external
memory.

Claim 7 (original): The electronic circuit of claim 1 wherein the servo control and
15 ECC decoder circuit is adapted to decode data received from a digital video
disk (DVD) removable media, or a compact disk (CD) removable media.

Claim 8 (original): The electronic circuit of claim 7 wherein the servo control and
20 ECC decoder circuit is adapted to control a DVD-type drive, or a CD-type
drive.

Claim 9 (original): The electronic circuit of claim 1 wherein the graphics decoding
circuit performs a Moving Picture Experts Group (MPEG) type graphics
decoding process to generate the video data.
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Claim 10 (cancelled)

Claim 11 (cancelled)

30 Claim 12 (currently amended): An electronic circuit fabricated on a monolithic

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substrate, the circuit comprising:

a servo control and ECC decoder circuit for controlling a removable media device to obtain encoded data from a removable media, and for performing a decoding process to obtain decoded data from the encoded data and storing the decoded data in an external memory;

a graphics decoding circuit for decoding graphics data held in the external memory to generate video data and audio data;

a memory controller to provide read and write access to the external memory for both the servo control and ECC decoder circuit and the graphics decoding circuit; and

a communications pathway enabling the servo control and ECC decoder circuit, the graphics decoding circuit and the memory controller to exchange information with each other,

wherein the decoder circuit, the graphics decoding circuit and the memory controller are fabricated on the monolithic substrate[.],

wherein the servo control and ECC decoder circuit further comprises:

a first register indicating a first storage location in the external memory for the encoded data from the removable media;

a second register indicating a second storage location in the external memory for the decoded data which is decoded from the encoded data;

and

a third register indicating a size of the decoded data.

Claim 13 (cancelled)

Claim 14 (currently amended): The electronic circuit of [claim 13]claim 12, wherein the second storage location overlaps the first storage location.

Claim 15 (original): The electronic circuit of claim 12, wherein the graphics decoder circuit further comprises:

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a video head pointer indicating a first address where a newest video data is
stored in the external memory;
an audio head pointer indicating a second address where a newest audio data
is stored in the external memory;
5 a video tail pointer indicating a third address where an oldest video data is
stored in the external memory;
an audio tail pointer indicating a fourth address where an oldest audio data
is stored in the external memory,
wherein the video head pointer and the video tail pointer constitute a video
10 circular buffer in the external memory, and the audio head pointer and
the audio tail pointer constitute an audio circular buffer in the external
memory.

Claim 16 (original): The electronic circuit of claim 15, wherein the graphics decoder
15 circuit stops the graphics decoding process when either the video head
pointer is about to write over the video tail pointer or the audio head pointer
is about to write over the audio tail pointer, so as to prevent loss of the video
data or the audio data respectively.

20 Claim 17 (original): The electronic circuit of claim 15, wherein the graphics decoder
circuit resumes the video tail pointer when the video tail pointer advances
close enough to the video head pointer, or resumes the audio tail pointer
when the audio tail pointer advances close enough to the audio head pointer.

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